

THE
PREVENTION OF STRICTURE
AND OF
PROSTATIC OBSTRUCTION

R. HARRISON, F.R.C.S.

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BY

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P R E F A C E .

THE first article, *On the Prevention of Stricture*, originally appeared in the *Lancet*, of May 15th, 1880: it is now reproduced with some additions, and I have coupled with it a paper *On the Prevention of Prostatic Obstruction*. These conditions are so frequently followed by results of an analogous kind that I have thought it convenient to consider them together, and at the same time to endeavour to show what may be done towards their prevention.

38, RODNEY STREET, LIVERPOOL,

October, 1881.



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THE PREVENTION OF STRICTURE.

THE Prevention of Stricture of the Urethra is a direction of inquiry hardly less important than that of the treatment of stricture itself.

It may be stated generally that, with the exception of strictures caused by injuries to the urethra, such as contusions, and by cicatrices, the preliminary stage is one of more or less chronic inflammation proceeding from a specific disorder. This condition of inflammation is distinctly a curable one, whilst its effect may be amenable only to relief.

It will, I think, be at once admitted that there are very few practitioners who have not at times experienced the greatest difficulty in effecting the cure of gleet—in arresting the small quantity of urethral discharge which persistently, and in spite of all treatment, local and general, remains after the acuteness of a gonorrhœa has abated. Many patients have in despair given up the attempt to obtain a cure, and so have incurred the risk of a stricture as a consequence.

And yet what is all this trouble about? Simply a slight purulent discharge from a chronically inflamed patch in the urethra, which, by reason of its position, presents difficulties in its treatment. It is a lesion which, if it occurred in one of the more accessible

spaces in the body, such as the mouth, nose, or larynx, where remedies can be directly and unerringly applied, there would not be the least difficulty in curing.

For the treatment of gleet a great variety of means and appliances have been suggested, including internal remedies in the shape of what are called anti-blennorrhagics, which are chiefly remarkable for their very nauseous taste; astringents of all kinds and degrees, applied locally as injections, or in the form of urethral pessaries; potent injections of caustics, which are only to be used by the practitioner himself with a suitable instrument; urethral brushes for the sweeping of the canal with a variety of solutions; insufflators for throwing in powders; contrivances for the application of ointments to the deeper portion of the urethra, *portes caustiques*, and the urethral speculum, or, as it is called, the endoscope—have all in their turn been brought into play. And for what purpose? For drying up somewhere about two minims *per diem* of muco-purulent discharge, which, were it not offensive to the sight, would probably be overlooked. We are often told in text-books that a persistent gleet is a sure forerunner of organic stricture; in fact, that a gleet may be regarded as indicating that a stricture is forming. By a train of reasoning, the force and soundness of which I am unable to recognise, the relative positions of gleet and stricture, as parts of a continued inflammatory process, have been transposed. We are

now told that pathologically we have been putting the cart before the horse, and that, as a matter of fact, from henceforward we are to understand that a gleet is an intimation to us, not that a stricture *will* form, but that it already exists.

If we admit the truth of this, and set aside our old-fashioned dogma about gleet being indicative of the inflammatory process that precedes the formation of a stricture, and so agree to alter the relative positions of the two, we shall then be prepared to adopt the view that a gleet can be effectually cured only by removing the stricture of which it is merely a symptom. And this latter we are asked to do by the employment of a dilating urethrotome and dilators, the use of which, judging from their size, would at once be misunderstood if they were described as being adapted for the treatment of stricture. Hence they are spoken of as instruments to be used in cases of gleet for the purpose of bringing urethras up to their "individuality," as if there were grounds for believing that in respect of form there is any more "individuality" about a man's urethra than about his rectum.

I must say that I viewed with positive horror the idea of performing an internal urethrotomy on a patient for a gleet on some presumptive evidence that his urethra lacked "individuality." I do not admit the soundness of the reasoning by which the different relationship of gleet to stricture is supposed to be proved, or the propriety of the practice which it is proposed to base upon it. In several instances which

have come under my notice, the performance of internal urethrotomy, as recommended by Dr. Otis, has entirely failed to remove the disease—namely, the gleet for which it was undertaken.* True, the “individuality” of the urethra was restored, but “la goutte militaire” remained—a compromise which the patient, at all events, failed to appreciate.

Nor is Dr. Otis’s operation free from dangerous as well as disappointing consequences, as I have shown by a published record of Mr. Berkeley Hill’s cases referred to elsewhere.† If we consider certain conclusions which the examination of gleet and stricture cases, in considerable numbers, enable us to arrive at, I do not think we shall have difficulty in explaining our want of success, or in improving our treatment without resorting to an operation which I have already referred to as being, in my belief, both hazardous and disappointing.

The conclusions I would lay stress upon are these:—1. That a large majority of strictures, excepting those caused by injuries to the urethra, are preceded by more or less chronic gonorrhœa or gleet. 2. That the most frequent seat of stricture corresponds with that of gleet—namely, the subpubic or deeper portion of the urethra.

Assuming these conclusions to be true, which I do, not only from my own personal observation, but from that of others who have had sufficient opportunities of

* “On Stricture of the Urethra,” by F. N. Otis, M.D., New York.

† *The Lancet*, April 8th, 1876.

forming an opinion, it certainly looks as if the persistence of gleet and the formation of stricture were due to the imperfect means hitherto adopted for dealing with the bulbous and membranous portions of the urethra when chronically inflamed; in fact, that the disease escaped treatment altogether.

Surely it is more rational to adopt this explanation than to regard the affection as an incurable one, or to propose to reverse the sequence of pathological events. Why do not women suffer from gleet or from stricture, or do so in such small proportion as not to alter the rule? Simply for the reason that the parts involved are easily to be got at for the purposes of treatment. The endoscope, moreover, has shown that the deeper portion of the urethra is the part affected in gleet, the appearance presented being granular and similar to what is observed in some forms of ophthalmia. Mr. Gould has also clearly demonstrated that this part of the canal, by reason of its position, is favourable to the retention of diseased secretions and other sources of irritation which would be likely to keep up the gleety discharge. *

These observations seem to point to the conclusion that our means for efficiently applying remedies to the sub-pubic urethra are more or less imperfect, and that if we could deal with this part as directly as we do with the anterior third of the canal, the treatment of its disorders would be as successful as that of the other accessible cavities and passages of the body.

* *The Lancet*, December 8th, 1877.

If I am correct in my assumption that the urethra at, and posterior to, the bulb (excluding of course the prostate) is the seat of the chronic inflammation we call "gleet," how utterly inert must be its treatment by injections as usually and popularly practised.

In the first place, I question whether an injection as used with an ordinary glass syringe ever succeeds in reaching the bulbous or the membranous portion of the urethra, and even if it does so, as it may in a few instances in the hands of practised operators, its contact with the membrane is so brief as to be really useless. The conventional mode of injecting, so far as the deeper portion of the urethra is concerned, is just about as efficacious as a gargle would be if a patient with a throat affection slyly took a mouthful of the fluid prescribed, retained it for something like a minute, and then spat it out, repeating this performance twice or thrice a day. What possible service would this render to an ulcerated throat? If to make up for the briefness of contact between the injected fluid and the diseased surface the former is materially increased in strength, its very astringency, by provoking spasm, renders it intolerable and consequently useless. Do not injections, I ask, so applied in gleet, prove to be utterly valueless, whatever astringent is selected for the purpose?

And, failing injections, or perhaps using them for supposed cleansing purposes, and as forlorn hopes, what else have we to fall back upon? Copaiba, cubebs, and sandal wood, separate or combined, in every variety of

form and shape, all more or less nauseous and disgusting. It is astonishing to what a tax of endurance a man will submit his palate and stomach to get rid of any trouble of this nature. Some of these anti-blennorrhagics, as they are called, prove successful in a certain proportion of cases in medicating the urine (often very obviously so), and thus curing the disease.

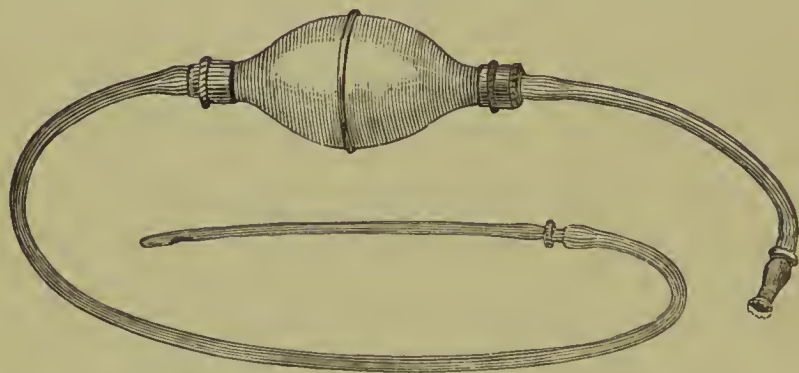
But what is to be done with the number of persons, not inconsiderable, who are positively made ill by these remedies, and who are also not benefited by injections? These, as a rule, go on trusting to the chapter of accidents, even if coming in the form of a newspaper advertisement, and generally reappear on the scene after the urethra has been sufficiently indurated, by persisting inflammation, to be treated for a stricture. For by this time, the membrane, being hardened and functionally incapacitated, has ceased to secrete muco-purulent matter, and an organised stricture is thus substituted. Such is, I believe, the usual sequence of events.

For some time past I have been employing in the treatment of gleet a very thorough irrigation of the urethra throughout its whole length by means of an apparatus which I have had specially constructed for the purpose. So far the results obtained have been highly satisfactory in speedily curing the gleet and consequently preventing the formation of stricture.

In carrying out my views I have taken a hint from what is now done with so much benefit in affections of the nasal passages, a thorough irrigation or washing

out of these by a suitable contrivance being substituted for the imperfect medication by syringes, brushes, snuffs, and such-like expedients, which were formerly prescribed with so little advantage. Many of the diseases of the nasal spaces which heretofore were considered most intractable are, by the improvements in mechanical contrivances referred to, rendered perfectly amenable to treatment.

To effect complete irrigation of the urethra, I make use of a small Higginson's syringe and a



sufficiently resisting vulcanised india-rubber catheter. I direct the patient twice or thrice a day to douche most thoroughly his urethra by means of these appliances, entirely discarding for the purpose all his notions about the old glass syringe arrangement as being utterly unfitted to cure a gleet. If the patient does not from the first recognise the necessity of submitting his urethra to a complete medicinal washing, his efforts here also, like his previous ones, will probably be ineffectual.

I direct the patient to denude himself of his nether garments, and, seating himself in a chair with his pelvis inclined forwards to the edge, to introduce the

soft catheter and gently pay it into the urethra, having previously anointed it with some vaseline. If the patient finds that he can introduce and retain more easily a stiffer catheter, he may substitute one of the French instruments in the same way, of the required length and size, taking care that the eye is within half an inch or thereabouts of the end. Having done this, he attaches the catheter to the small Higginson's syringe, which is connected with a tumblerful of the fluid to be used, tepid. I generally make use of the sulpho-carbolate of zinc, of the strength of about half a teaspoonful to a pint of water. The patient, steadying the catheter in his urethra with his left hand (not squeezing the meatus around it), slowly compresses the ball of the syringe with his right hand, the vessel containing the fluid to be injected being placed by his right side, or attached, as may be done by a bottle arrangement, to the feeding-pipe of the syringe. In this way the patient is directed to continue using the apparatus until the urethra has been completely washed out; the fluid, after it has circulated between the walls of the urethra and the catheter, escaping through the meatus, and being received into some convenient receptacle.

I may perhaps have been unnecessarily explicit in describing these details; but thoroughness in carrying them out, and in a manner very different from the furtive and speedy action which characterises the proceeding as effected with the glass syringe, is essential to success.

There are one or two points which remain to be noted. The catheter should be six inches in length, and be completely passed into the urethra, merely allowing room for the connexion with the syringe-pipe. The catheter should not be larger than a No. 6 (English gauge), so as to allow plenty of room between it and the walls of the urethra, in which the injected fluid can circulate. The eye in the catheter should not be too near the end, or too large, and its edge should be beveled so as not to scrape the urethra. For smoothness in introduction, Tiemann's (of New York) velvet-eyed india-rubber catheters are a great improvement on the English make, in which the eye of the instrument is punched out without being beveled.

Whilst injecting the fluid, its escape may suddenly be stopped for a few seconds; this proceeding forces the fluid into the small lacunæ of the urethra, and so cleanses and medicates them. The quantity of astringent in the fluid should not be too great; to cleanse and astringe without paining, or even smarting, is what is required. The operation should be repeated at least twice in the twenty-four hours. The appliances used are so simple that they can without inconvenience be brought into action in the course of a patient's ordinary bathing arrangements. I mention sulpho-carbolate of zinc as being the most generally applicable and useful astringent for these cases. Sulphate of zinc, borax, acetate of lead, quinine, and carbolic acid, all have their uses, according to circumstances, in these cases.

I have been asked whether harm may not be done by these injections finding their way into the bladder. I believe there is no danger of this contingency if the meatus of the urethra is not compressed for more than the few seconds necessary to distend the urethra and cleanse the lacunæ. When the meatus is not compressed, which is the ordinary position of things whilst the process is going on (provided the catheter is not larger than the size I have specified), the injected fluid far more easily finds its way *out* through the meatus than into the bladder. Besides, if it did go into the bladder, it would do no harm if the strength of the solution be kept within the bounds I have indicated.

About six inches is the extent to which the catheter should be passed before the injecting is commenced. If in a particular case I have any doubt on this head, I first make a careful examination of the urethra with an ordinary bougie. This will at once indicate by the sensation produced the point or points upon which it is necessary more especially to act. This may possibly require a lengthening or a shortening of the catheter. In compressing the syringe the action should be slow and gradual; if it is jerked, the fluid will not escape in the even and regular manner that is required, or the catheter may be forced out.

In connection with the subject of urethral discharges and stricture, there is one other point to which I should like to refer, and that is the importance of making a physical examination of the urethra after all attacks of gonorrhœa. Such an examination, when

properly conducted, need not be attended with the least inconvenience, whilst it provides against a patient becoming the unconscious victim of a stricture.

I have seen cases where, had such an examination been made, the whole course of a life might have been altered, and much annoyance as well as risk, incurred by a person with a stricture travelling in almost all habitable parts of the globe, averted.

I saw a medical man from the West Coast of Africa, who most unexpectedly suffered severely from retention during a journey of five hundred miles into the interior. He had a tight stricture, which we had no doubt was the result of a gonorrhœa he contracted six months previous to his leaving England, and of which he had no intimation until retention occurred under the unfortunate circumstances he mentioned. His stricture and an attack of jungle fever almost cost him his life. This gentleman would hardly have engaged in such a perilous undertaking had he had the least idea of the result of his gonorrhœa.

The actual number of deaths which each year are directly due to stricture of the urethra is not inconsiderable. But the mortality is not the only consideration. We have to take into account the number of those whose lives are shortened and rendered very miserable by the lesser degrees of this affection. Yet stricture is a disease which by a little foresight is preventable, and is only dangerous to life when it is allowed to proceed unchecked by treatment. In many instances that have come under my observation an

examination of the urethra after a gonorrhœa has been supposed to have been cured would have prevented much subsequent suffering.

I have not thought it necessary here to refer to the exceptional causes of gleet or urethral discharge. I have recently seen two cases where, though the patients may previously have had an ordinary gleet, they subsequently developed, by further contact, urethral chancres ; in both, the transition from one to the other had not been recognised. The induration of the last half inch of the urethra, the irregularity in the shape of the meatus, and the enlargement of the glands in the groin, were sufficient to indicate the pathological addition that had been made, and the treatment appropriate to it.

My friend, Mr. Chauncy Puzey, has informed me of a case where a gleet was maintained by a small polypoid excrescence within the urethra which could only be seen with a speculum. On removing this growth with a snare, the gleety discharge at once ceased.

In addition to its use in curing gleet and preventing stricture, I have found the urethral irrigator of considerable service in cases of spermatorrhœa, where, as a consequence of debility and all kinds of debauches, the generative apparatus has lost the tone that is necessary to the due performance of its function.

It is, however, in the treatment of gleet and the prevention of stricture more especially that I wish to draw attention not only to the value of the instrument,

but to the still greater importance of adopting more thorough means for the efficient application of remedies to the deeper portion of the urethra.*

* The urethral irrigator has been made for me by Messrs. Symes, Hardman Street, Liverpool, and Messrs. Tiemann, New York.

THE PREVENTION OF PROSTATIC
OBSTRUCTION.

HYPERTROPHY, or enlargement of the prostate gland, is a subject which still presents many points of interest to the practical surgeon.

If a retrospect be taken of the advances in treatment that have been made during the present century, they will be found to relate more to the management of the effects and complications produced by the enlargement than to the controlling of the growth itself. It may, in fact, be said that stricture of the urethra dependent upon an obstructing prostate has remained to the present day a disorder the treatment of which has made but little advance.

I hope to show that there is no reason why this should be, and that the treatment of prostatic obstruction may be more successful than that of any other form of urethral stricture dependent upon an adventitious growth or an enlargement.

Valuable additions have been made to our pathological and statistical knowledge of hypertrophy—of the percentage of persons so affected, of the parts of the gland involved in the growth, of the symptoms and effects thereby produced, and of the treatment appro-

priate to the latter. These and like questions may now be regarded as satisfactorily settled. How it comes about that a certain number of persons, as they grow old, suffer, and the remainder escape, and how the enlargement may be stopped or controlled, are two questions which cannot as yet be regarded as conclusively answered.

I do not propose to discuss the mode in which the enlargement is brought about. I recognise it as an hypertrophy, and I look for its explanation amongst the laws which Paget has formulated as determining hypertrophies or over-growths in other parts of the body. These are—“(1) the increased exercise of a part in its natural functions, (2) an increased supply of healthy blood, and (3) an increased accumulation in the blood of the particular materials which any part appropriates in its nutrition, or in secretion.”

If we apply these general laws to the prostate, we can have but little difficulty, having regard to its function so far as the generative act is concerned, in determining the conditions favourable to its enlargement and the agency through which this is effected. With this brief reference to the first question I have raised, I will pass on to consider, more at length, the early treatment of prostatic enlargement, this being the topic to which I wish to direct attention.

Ever since this special form of growth was recognised, surgeons have from time to time occupied themselves in the endeavour to discover means either to prevent such an enlargement taking place as a

certain age is reached, or to procure its absorption.

Without particularising any drug or special form of medicinal application, it may be stated generally that no adequately satisfactory results have hitherto been obtained in these directions, and consequently little has been done beyond waiting and dealing with such complications as they arose.

These complications all have reference to one effect of the enlargement—namely, the more or less blocking up of the deepest portion of the urethra, and the production of an obstacle to the escape of urine from the bladder, or the passing of a catheter into it.

It has seemed to me very unphilosophical that surgery should, as it were, stand by and permit one of the most important passages within the body to become seriously obstructed without making any effort to prevent it. I cannot help thinking that the way in which the prostate gland has been disassociated from the rest of the urethra is in a great measure responsible for this somewhat anomalous proceeding. If any other portion of the urethra showed signs of becoming obstructed, whatever might be the age of the patient, I undertake to say we should not allow it to proceed and content ourselves with waiting until retention of urine supervened.

I shall attempt to show that the obstructed prostatic urethra is as capable of successful treatment, so far as it relates to the prevention of retention and the consequences thereof, as any other portion of the canal.

The good effects of pressure in retarding and directing the progress of morbid growths, and in producing absorption, have long been recognised in surgery, and some attempts have from time to time been made to apply this principle to the enlarging prostate.

My attention was first called to this point some years ago by the case of an elderly gentleman who, in the belief that he had an enlarging prostate, took means which proved successful to prevent the occurrence of retention. Long before I knew him, he was told by a distinguished surgeon that his slight urinary troubles were the early indications of an enlarged prostate, and that sudden retention of urine was a not improbable event. This so alarmed him that up to within a short time of his death (which was from other causes) he never allowed a day to go by without passing a full-sized gum-elastic bougie for himself. He remained quite free from any urinary inconvenience, a circumstance which he attributed to the means he adopted. I made a *post-mortem* examination, and found that though the middle lobe of his prostate was considerably enlarged, the level and patency of the prostatic urethra were in no way altered, the growth or enlargement being, as it were, deeply bisected by the canal, as represented in the accompanying figure.



It appeared to me, to use the phrase of my patient,

that "the maintenance of the water-way" was directly traceable to the persistent catheterism that had been employed.

The effects of the regular and frequent introduction of a bougie, in this instance, were so obviously beneficial, that I determined to adopt a similar practice in all cases where I had reason to believe the prostate was beginning to enlarge. My object in doing so was not so much to obtain absorption, as was attempted by some appliances of Physick and others, as to prevent mechanical obstacle being interposed.

It may be objected that the possibility of passing an instrument into the bladder, offers no guarantee that, on its withdrawal, micturition will be spontaneously accomplished. A prostatic valve may not resist the introduction of a bougie, but yet be capable of obstructing micturition. What I would urge is that the employment of persistent catheterism on the first indication of the prostate enlarging, though not preventing the growth taking place, will yet have the effect of so moulding it as it grows as to prevent interference with the mechanism of micturition.

It is now some years since I began to advocate and practise persistent dilatation under these circumstances, with results so satisfactory as to warrant me in bringing this treatment under the more general notice of the profession. There can be no doubt that a very considerable proportion of bladder troubles met with in elderly persons are directly due to this mechanical impediment to micturition, which I believe

is both preventable and remediable. Of these troubles, however, I would specially mention retained and offensive urine, chronic inflammation, irritability, stone and saccules, and, remotely, analogous effects on more distant organs, such as the kidneys. Furthermore, that an established bladder trouble is the origin of what we commonly speak of as "a general break-up" is a fact, unfortunately, too often illustrated.

Mercier's attempts at dilatation of the prostate appear to have been attended with a certain amount of benefit; he seems, however, to have endeavoured to obtain his object by subjecting the enlargement to divulsion with an apparatus provided with diverging blades, rather than by the maintenance of the relations of the canal by any such gradual and persistent agency as that I am advocating.

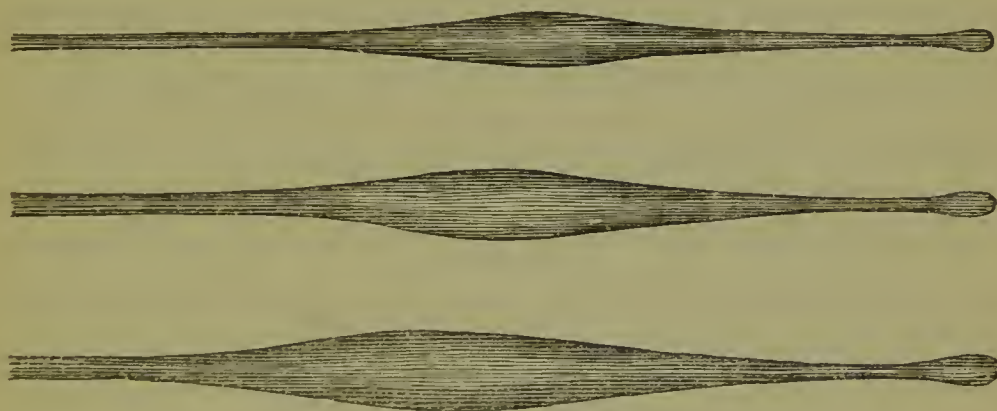
Sir Henry Thompson* refers to his experience in the employment of compression by an india-rubber tube with water. This plan does not appear to have given satisfactory results. The recognition of the value of compression by so high an authority is in itself sufficient to warrant the adoption of the principle, provided that it can be safely and efficiently applied.

On the recognition of symptoms indicating that enlargement of the prostate has commenced, I at once urge the regular and persistent employment of the prostatic bougie. For the most effectual carrying out of this treatment, I instruct the patient as early as

* On Diseases of the Prostate.

practicable in the introduction of the bougie, and when I have determined the size of the instrument, I require him to use it daily, or at the least thrice a week, on going to bed.

In the employment of instruments for this purpose it is of importance that a kind should be used which is efficient, and at the same time incapable of doing harm to the parts when placed in the hands of a non-professional person of average intelligence. After many trials of different shapes and descriptions of bougies, I have come to the conclusion that the instrument which best answers the purpose is the bougie olivaire, of which I have selected some different sizes.*



The olive-shaped dilators exercise as much pressure as can be desired on the obstructing portion of the prostate, whilst, by reason of the small size of the stem, no tension is thrown on the most sensitive portion of the urethra—namely, the orifice.

I have these prostatic dilators made from two to

* These instruments may be obtained from Mr. Wood, 81, Lord Street, Liverpool, or Messrs, Tiemann, New York.

four inches longer in the stem than ordinary urethral bougies, in order that the olive portion may be fairly passed into the bladder. In this way pressure is exerted on the prostate as the expanded part passes into the bladder, and again as it is withdrawn. It is very important that the instrument should be used in this way, as the dilatation exercised by the bulb, on the withdrawal of the bougie, corresponds with that of the urine as it is expelled from the bladder.

The patient should place himself in the recumbent position, with the buttocks slightly raised, and then, having lubricated the bougie freely with vaseline, and made it pliable by drawing it a few times through the hand, he should slowly introduce it until the expanded portion is fairly within the bladder; he then gently withdraws it. In this way, as I have already explained, the prostate is twice acted upon by the expanded portion of the dilator.

At first the instrument may be passed once in forty-eight hours, subsequently twice, and in cases where the prostate has already become large, I have caused it to be used night and morning with most satisfactory results.

If the treatment is commenced sufficiently early, though the prostate may be hypertrophied, obstruction to micturition is effectually prevented. When the prostate has already become enlarged, and there is also difficulty in micturating, this treatment will be found equally efficacious. In either case it is necessary to continue this treatment long after all indications of obstruction

have ceased ; when, however, the patient has acquired the habit of self-catheterism, he is loth to forego it, as any slight inconvenience the operation may occasion is not to be put against the obstruction to micturition that usually terminates all cases where an enlarged prostate is left untreated when mechanical treatment becomes a necessity.

Cases are occasionally met with where patients have an apparently unnatural degree of intolerance of instrumental interference with the urethra, even of the gentlest kind. Many of them would be largely benefited by such treatment, but are debarred from the advantages thereof by what almost amounts to an idiosyncrasy. I have carefully analysed several of these cases, and, though the statement may appear almost paradoxical, I have found persons passing urine which, in its composition, seemed to me to be fully as irritating as any instrument could well be to the urethra. I have been able to trace this extreme sensitiveness of the urethra to the presence of uric acid crystals in unnatural quantities in the urine, and by preliminary treatment, having for its object the correction of the urine, I have had the satisfaction of making patients, previously intolerant, capable of undergoing, with the fullest advantage, the instrumental treatment that was necessary.

When the prostate is already large, and the bladder is never completely emptied, I use a catheter, similarly shaped to the prostatic dilator, in order that all the urine may be removed at the same time that dilatation

is practised. As a rule, patients will find the recumbent position the most suitable for self-catheterism; there is less chance of spasm being excited. I am at a loss to understand how any other posture came to be selected, and I am surprised to find some authors and practitioners advocating the patient being placed erect when either catheters or bougies have to be passed. I have frequently seen surgeons endeavour to introduce a catheter for a patient with an enlarged prostate who has been placed in the erect position, and fail: I have suggested the recumbent position, and had the satisfaction of seeing the same operator succeed.

It often happens that the obstacle to catheterism which has to be overcome is the large prostate falling forwards on to the top of the instrument, partly by gravity and partly by the pressure of the urine behind it. Though, as a rule, we can best attain our object by doing things after the manner we have been long accustomed to, yet I should never think of instructing a student to pass a catheter or a bougie for a patient in any other than the recumbent position.

I have already given an illustration of what results may be obtained on the enlarged prostate by the persistent use of a bougie. I will select another example from my wards in the Royal Infirmary:—

W. B., æt. 72, was admitted under my care in the summer of 1881. He had an enlarged prostate, and as a consequence of this a chronically inflamed bladder. Both by day and night,

especially the latter, calls to micturate were most frequent ; the urine was ammoniacal, and deposited a large amount of ropy mucus. Under this constant irritation his general health was rapidly deteriorating.

We first commenced to treat his cystitis by regularly washing out his bladder, and by the use of the hot douche, commencing at a temperature of 100° Fahr., and gradually increasing it (measured by the thermometer) till 120° Fahr. was reached. I have found this treatment of great service, particularly in these cases of chronic cystitis associated with a large prostate. It often happens that when the inflammation has been removed, the bladder long remains preternaturally sensitive. To remedy this condition I have tried many things, but nothing is so useful as the hot douche.

In this way the cystitis was removed, and I then began to treat the cause of it—namely, the enlarged prostate. After instructing the patient how to pass the instrument for himself, he so quickly improved that he was soon able to attend as an out-patient. I accidentally met him in the street a short time ago, when he told me that he was quite well, had no difficulty in micturating, and could hold his water for four hours. He still continued to pass the prostatic dilator once every twenty-four hours. In something less than three months of treatment this patient was practically cured of a disorder which had annoyed him more or less for eight years. I am indebted to my Acting House-Surgeon, Mr. Dawson, for the trouble he took in this as well as in other cases during his period of office, particularly in the application of the hot douche, and in noting for me its results.*

* I recently met with some remarks on the use of hot water in certain affections of the bladder, which are corroborative of my own observations:—
 “ This gentleman has been restored to health and comfort, and his symptoms all relieved, by the use of the large silver catheter, and by washing out the bladder with water as hot as he could bear it every other day. It had a marked and rapid effect upon him ; and I am so satisfied of the efficacy of the remedy,

Though it is upon mechanical measures we must place chief reliance in the controlling of prostatic enlargement and preventing interference with micturition, I have also for some years been in the habit of laying stress upon the following points in advising persons who have reason to believe that they are suffering from the earlier symptoms of the affection :—

1st. To avoid being placed in circumstances where the bladder cannot be emptied at will.

2nd. To avoid checking perspiration by exposure to cold, and thus throwing additional work on the kidneys. In climates such as our own, elderly persons should, both in summer and winter, wear flannel next the skin.

3rd. To be sparing of wines, or of spirits exercising a marked diuretic effect either by their quantity or their quality. Select those which promote digestion without palpably affecting the urinary organs. A glass of hot gin-and-water, or a potent dose of sweet spirits of nitre, will not do anything to remove the residual urine behind an enlarged prostate.

4th. To be tolerably constant in the quantity of fluids daily consumed. As we grow older our urinary

and of the advantage to be derived from its use, that I strongly recommend it in all cases in which there is any affection of the bladder ; sometimes combined with the various preparations of opium, and particularly those of morphia. I believe it is important that the water should be of a higher temperature than that of the urine when discharged. It should, however, be first used at 98°, and the temperature may be gradually increased until it has reached the highest point that feels comfortable and advantageous to the patient, at which it should be retained.”—*On the Anatomy and Diseases of the Bladder*, by G. J. Guthrie, F.R.S.

organs become less capable of adapting themselves to extreme variations in excretion. Therefore it is desirable to keep to that average daily consumption of fluids which experience shows to be sufficient and necessary. How often has some festive occasion, where the average quantity of fluid daily consumed has been largely exceeded, led to the over-distension of a bladder long hovering between competency and incompetency. The retention thus occasioned, by suspending the power of the bladder, has frequently been the first direct step towards establishing a permanent, if not a fatal, condition of atony or paralysis of this organ.

5th. It is important that from time to time the reaction of the urine should be noted. When it becomes permanently alkaline in reaction, or is offensive to the smell, both prudence and comfort indicate the regular use of the catheter.

6th. Some regularity as to the time of performing micturition should be inculcated. We recognise the importance of this in securing a regular and healthy action of the bowels, and though the conditions are not precisely analogous, yet a corresponding advantage will be derived from carrying out the same principle in regard to micturition.

The sum of these instructions is, that inasmuch as we cannot arrest the degenerative changes by which the prostate becomes an obstacle to micturition, it is obviously of the first importance that every means should be taken to compensate for this by promoting

the muscularity of the bladder and preventing it becoming atrophied or paralysed either by accident or improper usage.

Of the medicines that I have found most useful, in conjunction with mechanical means, in restoring the tone of the bladder, I would mention the ergot of rye, which I generally give in the form of the fluid extract in cinnamon-water. Further experience only strengthens the good opinion of this drug I have elsewhere expressed in the treatment of this complication of prostatic enlargement.

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